



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,899	09/18/2001	Bror H. Hanson	1641.00005	8597
7590	04/08/2004			EXAMINER
Bliss McGlynn & Nolan, P.C. Suite 600 2075 West Big Beaver Road Troy, MI 48084			JOLLEY, KIRSTEN	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/954,899	HANSON, BROR H.
	Examiner	Art Unit
	Kirsten C Jolley	1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 January 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
 - 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) Claim(s) 13 and 14 is/are allowed.
- 6) Claim(s) 11,12,15 and 16 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 1-16 are pending. This application contains claims 1-10 drawn to an invention nonelected with traverse in the response filed July 30, 2003. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Response to Arguments

2. Applicant's arguments filed January 15, 2004 have been fully considered but they are not persuasive.

With respect to the obviousness-type double patenting rejections, Applicant argues that none of the claims of the Hanson et al. '026, Hanson et al. '495, or Urena '251 patents claim a wax material that includes about 7 to about 10 weight percent solids. Applicant states that the Examiner has failed to correctly apply an obviousness-type double patenting rejection by comparing the invention to the claims, and only the claims, of the prior art references. The Examiner notes that only the claims of the reference to which double patenting is asserted (i.e., the Hanson et al. '026 and '495 references) were used to compare with the claimed invention. The claims of Hanson et al. '026 and '495 merely lack that the solvent base wax material includes about 7 to about 10 weight percent solids. The Urena '251 reference is cited to demonstrate that solvent base wax material having 5-15 wt % wax, and thus 5-15 wt % solids, is conventionally known in the art; the range of 5-15 wt % solids taught by Urena overlaps the

range claimed by Applicant. MPEP 804 discloses that the claim in the application at issue is compared to the “patent claim and the prior art.” In this case, the claims at issue are compared to the claims of Hanson et al. ‘026 and Hanson et al. ‘495, and to the known “prior art” of Urena ‘251. It is not required that the *claims* of the Urena ‘251 reference are used as the showing of prior art.

With respect to the 35 USC 103 rejections over Hanson et al. ‘495 in view of Urena, Applicant argues that the Hanson et al. reference does not disclose providing a barrier coating of a substantially liquid wax material, wherein the wax material includes about 7 to about 10 weight percent solids. The Examiner notes that Hanson et al. teaches providing a barrier coating of a substantially liquid wax material by spraying solvent base wax on the mold surface as disclosed in col. 5, lines 53-61. The Examiner acknowledges that Hanson et al. does not teach the use of a wax material containing about 7 to about 10 weight percent solids. It is the Examiner’s position that because Hanson et al. lacks any details about an exemplary solvent base wax composition that may be used in its invention, one having ordinary skill in the art would have been motivated to look to the prior art, such as the Urena reference, for conventional solvent-based wax coating materials that may be used as the mold release coating composition in Hanson et al.’s mold coating process.

With respect to the Urena reference, Applicant argues that Urena does not disclose providing a barrier coating of a substantially liquid wax material, wherein the wax material includes about 7 to about 10 weight percent solids. The Examiner disagrees. Urena discloses a solvent-based wax coating material that is sprayable and may be used for providing a release

Art Unit: 1762

coating on molds (col. 2, lines 23-36, col. 4, lines 51-53, and col. 5, lines 15-25). Further, Urena teaches that the wax is included in an amount of about 5-15% by weight. Since Urena teaches that the only essential ingredients of its composition are wax and solvent, the range of 5-15 wt % solids corresponds to 5-15 wt % wax. Overlapping ranges are *prima facie* evidence of obviousness. It would have been obvious to one having ordinary skill in the art to have selected the portion of Urena's weight percent wax range that corresponds to the claimed range. *In re Malagari*, 184 USPQ 549 (CCPA 1974). Additionally, Urena teaches in Table I (col. 5) that 10 % by weight of microcrystalline wax is used when the wax-containing coating is used as a mold release coating for polystyrene foam. Therefore, Urena discloses a substantially liquid wax material wherein the wax material has weight percent solids in the range of 5-15 wt %, which overlaps the claimed range of 7-10 wt %, and specifically 10 wt % when used as a mold release coating for polymeric foam.

Applicant argues that none of the references cited, either alone or in combination with each other, teach or suggest the claimed invention of claims 11, 12, 15, and 16, and that there is no suggestion or motivation for combining Hanson et al. and Urena together. The Examiner disagrees. As discussed above, since Hanson et al. lacks any details of an exemplary solvent base wax composition that may be used in its invention, one having ordinary skill in the art would have been motivated to look to the prior art for conventional solvent-based wax coating materials that may be used as the mold release coating composition in Hanson et al.'s mold coating process. Urena discloses an exemplary solvent base wax material that may be useful for as a release coating on mold surfaces, and specifically for use in molding foamed polymeric products (as is done in Hanson et al.). It remains the Examiner's position that it would have been

Art Unit: 1762

obvious for one having ordinary skill in the art to have used Urena's sprayable solvent-based wax coating composition as the solvent based-wax coating in Hanson et al.'s process with the expectation of successful results since Hanson et al. is silent and not limiting with respect to a liquid wax composition that may be used and Urena discloses an exemplary solvent based wax composition, and also because one would desire a coating that is flexible, adheres well, has less tendency to peel and crack, does not require complex mixing equipment or numerous ingredients, and is stable at high temperatures. Additionally, the test of obviousness is not express suggestion of the claimed invention in any or all references but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them. *In re Rosselet*, 347 F.2d 847, 146 USPQ 183 (CCPA 1965); *In re Hedges*, 783 F.2d 1038.

Specification

3. The use of trademarks have been noted in this application, for example on pages 6-7, the trademarks "Polywax" and "Aerosil". The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Applicant argued in the response that the trademarks on page 6 have been capitalized and are accompanied by generic terminology, however the Examiner notes that the trademarks should be capitalized *by capitalizing each letter of the mark*. See MPEP 608.01(v).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 11-12 and 15-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 6, and 8 of U.S. Patent No. 6,291,026 in view of Urena (US 5,294,251). The claims of U.S. Patent No. 6,291,026 teach the limitations of instant claims 11-12 and 15-16, except the claims of U.S. Patent No. 6,291,026 lack a limitation of 7-10 weight percent solids in the solvent base wax coating on the mold surface. Urena is cited for its teaching of a conventional solvent based wax coating useful as a mold release coating that preferably comprises 5-15% by weight wax solids in its coating (col. 4, lines 32-35). It would have been obvious for one having ordinary skill in the art to have modified the method of the claims of U.S. Patent No. 6,291,026 by using Urena's conventional solvent based wax coating as the coating on the mold surface with the expectation of successful results because, since U.S. Patent No. 6,291,026 lacks details of an exemplary solvent base wax material that may be used in its invention, one skilled in the art would have been motivated to look for conventional solvent based wax mold release coatings that may be used, and

Art Unit: 1762

additionally because Urena teaches the benefit of producing a flexible film that adheres well and has less tendency to peel and crack compared to other wax coating compositions, does not require complex mixing equipment or numerous ingredients, and is stable at high temperatures (col. 2, lines 7-16 and col. 3, lines 43-48). Further, it is noted that when using a solvent base wax, the solvent will start to evaporate immediately, therefore drying will inherently occur prior to applying the release powder layer. Also, the wax coating layer thickness is a cause-effective variable depending upon the molding conditions, i.e., temperature and length of time of heating. It is well settled that determination of optimum values of cause effective variables such as these process parameters is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

6. Claims 11-12 and 15-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 6, and 8-9 of U.S. Patent No. 6,117,495 in view of Urena (US 5,294,251). The claims of U.S. Patent No. 6,117,495 teach the limitations of instant claims 11-12 and 15-16, except the claims of U.S. Patent 6,117,495 lack a limitation of 7-10 weight percent solids in the solvent base wax coating on the mold surface. Urena is cited for its teaching of a conventional solvent based wax coating useful as a mold release coating that preferably comprises 5-15% by weight wax solids in its coating (col. 4, lines 32-35). It would have been obvious for one having ordinary skill in the art to have modified the method of the claims of U.S. Patent No. 6,117,495 by using Urena's conventional solvent based wax coating as the coating on the mold surface with the expectation of successful results because, since U.S. Patent No. 6,117,495 lacks details of an exemplary solvent base wax material

Art Unit: 1762

that may be used in its invention, one skilled in the art would have been motivated to look for conventional solvent based wax mold release coatings that may be used, and additionally because Urena teaches the benefit of producing a flexible film that adheres well and has less tendency to peel and crack compared to other wax coating compositions, does not require complex mixing equipment or numerous ingredients, and is stable at high temperatures (col. 2, lines 7-16 and col. 3, lines 43-48). Further, it is noted that when using a solvent base wax, the solvent will start to evaporate immediately, therefore drying will inherently occur prior to applying the release powder layer. Also, the wax coating layer thickness is a cause-effective variable depending upon the molding conditions, i.e., temperature and length of time of heating. It is well settled that determination of optimum values of cause effective variables such as these process parameters is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 11-12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson et al. (US 6,117,495) in view of Urena (US 5,294,251).

With respect to claim 11, Hanson et al. discloses a method for forming a mold release coating on a mold surface comprising the steps of applying a barrier coating of a liquid solvent

Art Unit: 1762

base wax material on the mold surface (for example by spraying), and applying a release powder onto the wax coating layer (col. 5, lines 53-64). Hanson et al. lacks a teaching of the first solvent base wax coating material containing about 7 to about 10 weight percent solids. Further, it is noted that Hanson et al. lacks any specific details or exemplary compositions of the solvent base wax coating material that may be used in its invention. One having ordinary skill in the art would have been motivated to look to the prior art for conventional solvent-based wax coating materials that may be used as the mold release coating composition in Hanson et al.'s mold coating process.

Urena discloses a solvent-based microcrystalline wax coating composition that may be used as a mold release coating and may be applied by spraying (see Abstract, col. 4, lines 51-53, and col. 5, lines 22-25). Urena teaches that its solvent-based microcrystalline wax coating comprises about 5-15% wax by weight. It would have been obvious for one having ordinary skill in the art to have used the solvent-based wax coating of Urena as the wax base coat material in Hanson et al.'s mold coating process with the expectation of successful results since Hanson et al. is silent and not limited as to the types of wax coatings that are used in its invention and therefore one skilled in the art would have been motivated to look to conventional coating materials to determine exemplary coating compositions, and additionally because Urena's microcrystalline wax coating composition produces a flexible film that adheres well and has less tendency to peel and crack compared to other wax coating compositions, does not require complex mixing equipment or numerous ingredients, and is stable at high temperatures (col. 2, lines 7-16 and col. 3, lines 43-48).

With respect to the range of percent solids, it is noted that, because the coating composition of Urena only comprises solvents as essential ingredients in addition to the wax, the range of 5-15% by weight wax corresponds to 5-15% by weight solids. Additionally, overlapping ranges are *prima facie* evidence of obviousness. It would have been obvious to one having ordinary skill in the art to have selected the portion of Urena's weight percent wax range that corresponds to the claimed range. *In re Malagari*, 184 USPQ 549 (CCPA 1974). Further, it is noted that Urena teaches in Table I (col. 5) that 10 % by weight of microcrystalline wax is used when the wax-containing coating is used as a mold release coating for polystyrene foam. Since Hanson et al. is specifically direct to mold release coating for use in molded polymeric foam parts (col. 1, lines 20-21), it would have been obvious for one having ordinary skill in the art to have used Urena's solvent-based wax coating comprising 10 % by weight microcrystalline wax because Urena discloses successful results when its coating composition is used as a mold release coating for polystyrene foam.

Hanson et al. does not specifically state that substantial drying of its solvent base wax material occurs prior to applying the release powder thereon. It is noted that Hanson et al. states: "Periodically, such as once every ten parts, a normal application of solvent base wax is sprayed on the mold. Just before pouring each part, the release powder is electrostatically deposited on the base coating in the mold, generally 0.5 to 2 g." Therefore it is noted that application of the release powder does not occur immediately after applying the wax coating layer, and additionally is necessarily applied to a dried wax layer in 9 of every 10 applications because Hanson et al. teaches that the wax layer remains on the interior of the mold after a completed molding operation. Further, it is noted that Urena states that its solvent is selected to provide "rapid

Art Unit: 1762

evaporation" and "quickly evaporates" (col. 3, lines 64-67 and col. 5, lines 1-2), therefore the solvent in the solvent base wax coating would inherently quickly evaporate from the wax coating layer after application, thus leaving a substantially dry coating prior to application of the release powder.

With respect to claim 12, Hanson et al. states that the base coat is a "built-up layer of solvent base wax" which necessarily requires that at least two layers of the liquid wax material are applied to the mold surface. It is the Examiner's position that the wax layers are substantially dried after deposition for the reasons discussed in the paragraph above.

As to claims 15 and 16, Hanson et al. discloses applying the release powder by electrostatic spraying and in an amount in the range of 0.5 to 2 grams (col. 5, lines 61-64). With respect to claim 15, it is noted that overlapping ranges are *prima facie* evidence of obviousness. It would have been obvious to one having ordinary skill in the art to have selected the portion of Hanson et al.'s powder amount range that corresponds to the claimed range. *In re Malagari*, 184 USPQ 549 (CCPA 1974).

Allowable Subject Matter

9. Claims 13-14 are allowed for the reasons discussed in the Office action mailed September 11, 2003.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 1762

Kirsten C Jolley

Kirsten C Jolley

Patent Examiner

Art Unit 1762

kcj